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AN INTEGRATED PERFORMANCE MEASUREMENT MODEL FOR EMERGENCY DEPARTMENT ASSESSMENT

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for the 6th Danish Emergency Medicine Conference

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INTRODUCTION

- New ways of organizing acute care delivery need to be developed and assessed
- Numerous larger changes have affected the ED in recent years and will continue to do so
- Impact on the ED as a system not clear

OBJECTIVE

- To develop a performance measurement (PM) tool that enables ED decision makers to
 1. monitor the effect of new performance enhancing initiatives
 2. show how internal processes are connected

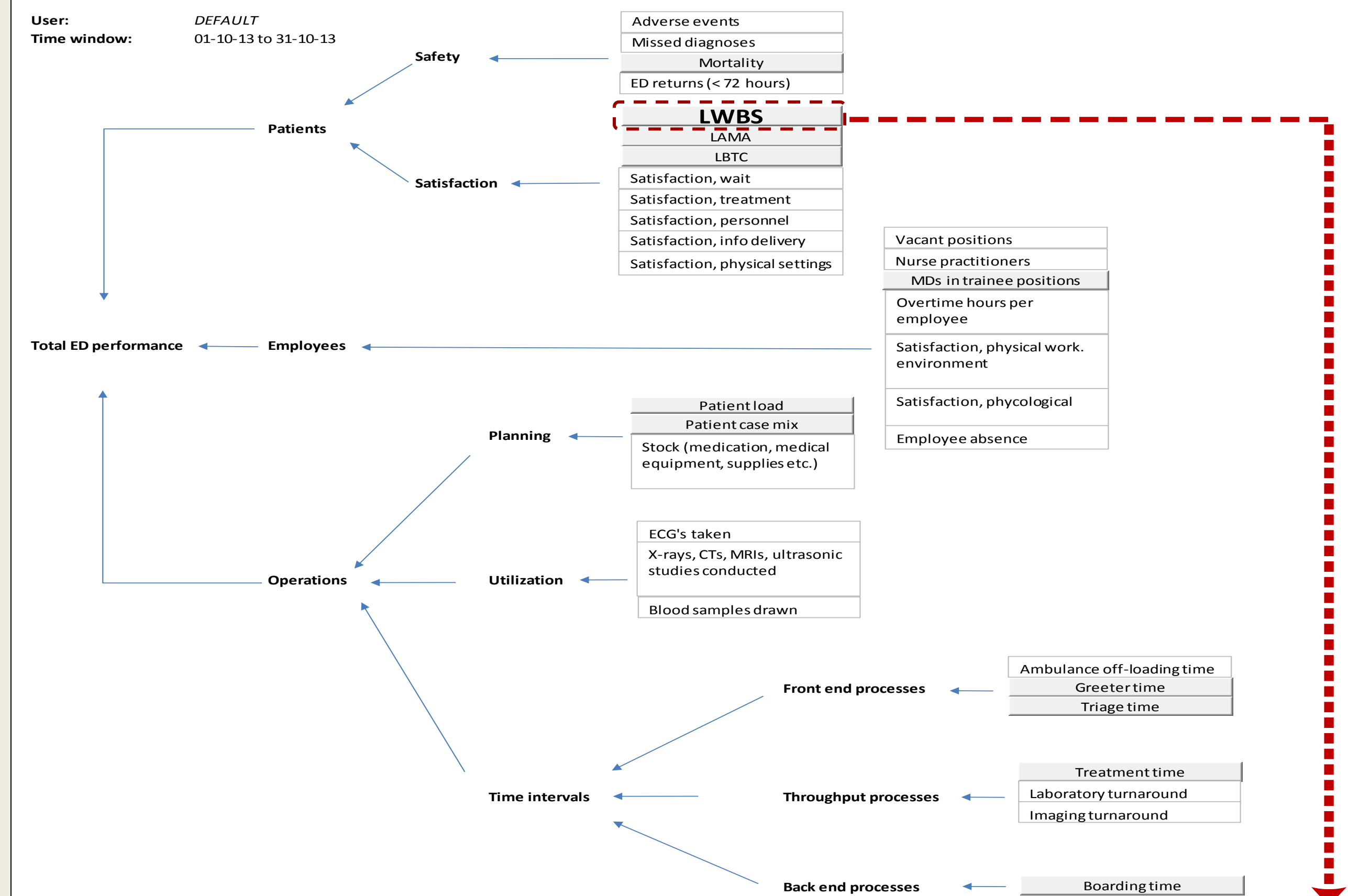
METHODS

- Multiple case study involving three EDs
- Builds on a prior literature study on recommended performance indicators for ED assessment
- 42 semi-structured interviews were conducted with key staff representatives, evenly distributed among the cases, to identify interconnections between performance indicators
- Performance data was retrieved from all included cases
- Process control charts were utilized to assess variation in each performance indicator

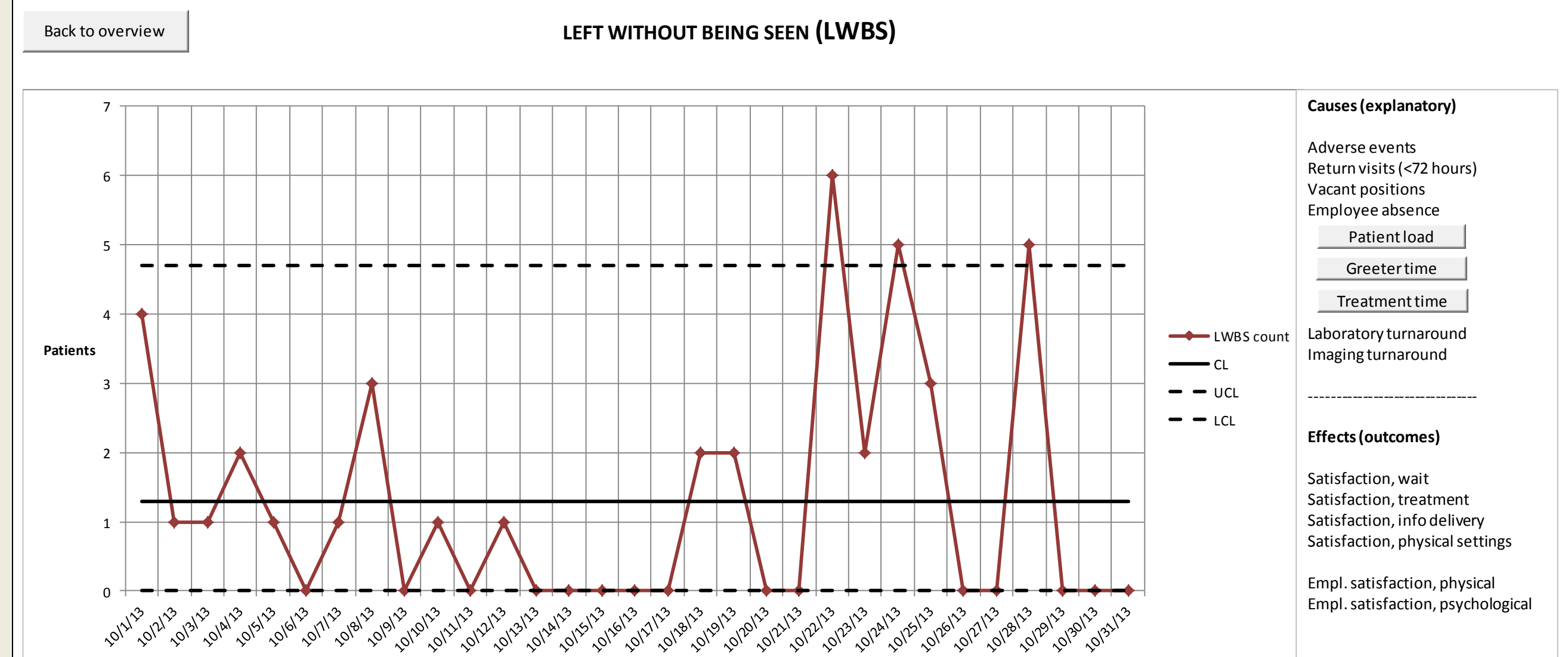
DISCUSSION

- A first step towards data-driven management of acute care delivery
- Draws on systems thinking and statistics
- Novel causal tracing of how performance enhancing initiatives impact the system
- The PM tool should be applied together with other available information sources
- Potential to include a cost module and indicators for patient specific conditions (e.g. pneumonia and sepsis)

RESULTS



RESULTS



LIMITATIONS

- Manual data entry and analysis (PM tool is currently a prototype)
- Data validity is questionable
- No way of determining time delays from an intervention is launched to effect kicks in
- Turn attention from suggesting connections to apply data in a system dynamics simulation model, enhancing understanding of the ED as a complex system

CONCLUSION

- A PM tool was developed that can track all-round ED performance on selected indicators
- Connects indicators based on causal causes and effects
- Can potentially be implemented in existing data repositories for automation purposes
- Potential extensions include 1) turn PM tool into a system dynamics model and 2) develop an add-on that considers financial aspects